6. (Amended) The phosphoprotein (P) protein of Newcastle disease virus (NDV) encoded by the nucleic acid molecule of claim 3 or claim 4, wherein the protein comprises the amino acid sequence set forth as SEQ ID NO: 4.

15. (Amended) A fused or non-fused form of NDV nucleocapsid protein isolated and purified from culture of the transformed microorganism of claim 11 or claim 13, wherein the protein comprises the amino acid sequence set forth as SEQ ID NO: 3.

16. (Amended) A fused or non-fused form of NDV phosphoprotein isolated and purified from culture of the transformed microorganism of claim 12 or claim 14, wherein the protein comprises the amino acid set forth as SEQ ID NO: 4.

Remarks

Applicants have amended the claims and specification to include the sequence identification numbers for the sequences in the claims and have amended the claims for clarification. No new matter has been added by this amendment. Applicants also hereby request the entry of the sequence listing into the application.

If the amendment is defective or unclear, the Examiner is invited to telephone the undersigned at the telephone number listed below.

Respectfully submitted,

John R. Van Amsterdam

Reg. No. 40,212

Wolf, Greenfield & Sacks, P.C.

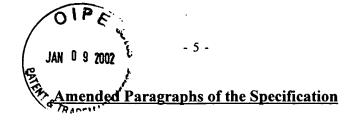
600 Atlantic Avenue

Boston, MA 02210-2211

(617) 720-3500

Docket No. S1436/7007 Date: January 9, 2002

X1/09/02



Page 3, line 5.

NP coding region <(SEQ ID NO: 1)>

Page 5, line 3.

P gene coding region <(SEQ ID NO: 2)>

Page 6, line 19.

NP gene <(SEQ ID NO: 1)>: amino acid sequence <(SEQ ID NO: 3)>

Page 9, line 23.

P gene <(SEQ ID NO: 2)>: amino acid sequence <(SEQ ID NO: 4)>

Page 13, lines 11 through 18.

For the amplification of the NP gene

NPf1 (20 mer): 5'- cct tct gcc aac atg tct tc -3' (Forward primer<; SEQ ID NO: 5>)

NPr1 (20 mer): 5'- tca ata ccc cca gtc ggt gt -3' (Reverse primer<; SEQ ID NO: 6>)

NPr2 (18 mer): 5'- ata ccc cca gtc ggt gtc -3' (Reverse primer<; SEQ ID NO: 7>)

For the amplification of the P gene

Pf1 (20 mer): 5'- atg gcc acc ttt aca gat gc -3' (Forward primer<; SEQ ID NO: 8>)

Pr1 (23 mer): 5'- taa tta gcc att tag tgc aag gc -3' (Reverse primer<; SEQ ID NO: 9>)

Pr2 (21 mer): 5'- gcc att tag tgc aag gcg ctt -3' (Reverse primer<; SEQ ID NO: 10>)

Page 14, lines 13 through 27.

For the sequencing of the NP gene coding region

PTrcHis2F (21 mer): 5'- gag gta tat att aat gta tcg -3' <(SEQ ID NO: 11)>

SNPf1 (21 mer): 5'- gac tca tac atc agg aac acc -3' <(SEQ ID NO: 12)>

SNPf2 (21 mer): 5'- gat gag agc agt ggc gaa cag -3' <(SEQ ID NO: 13)>

PTrcHis2R (18 mer): 5'- gat tta atc tgt atc agg -3' <(SEQ ID NO: 14)>

SNPr1 (20 mer): 5'- tca ata ccc cca gtc ggt gt -3' <(SEQ ID NO: 15)> sNPr2 (21 mer): 5'- cta agt tgt aat acg tgg agc -3' <(SEQ ID NO: 16)> sNPr3 (21 mer): 5'- cca tcg atc tca aga aca tgc -3' <(SEQ ID NO: 17)>

For the sequencing of the P gene coding region

pTrcHis2F (21 mer): 5'- gag gta tat att aat gta tcg -3' <(SEQ ID NO: 18)>
sPf1 (21 mer): 5'- gtc gac ttt gtg cag gcg atg -3' <(SEQ ID NO: 19)>
sPf2 (21 mer): 5'- gga cac tgt ccg tgc att gat -3' <(SEQ ID NO: 20)>
pTrcHis2.R (18 mer): 5'- gat tta atc tgt atc agg -3' <(SEQ ID NO: 21)>
sPr1 (21 mer): 5'- cca ggg tcc aga att ttc atc -3' <(SEQ ID NO: 22)>
sPr2 (22 mer): 5'- ggt gtg gat agc tgt ttg tct g -3' <(SEQ ID NO: 23)>

Amended Claims

- 1. (Amended) <A nucleic acid molecule>[Nucleotides] encoding the full length or part of the nucleocapsid (NP) protein of Newcastle disease virus (NDV).
- 2. (Amended) The [nucleotides as claimed in] <nucleic acid molecule of> claim 1<, wherein the nucleic acid molecule comprises the nucleotide sequence set forth as SEQ ID NO: 1.> [characterised in that it has the following nucleotide sequence:

ATGTCTTCCG TATTCGATGA ATACGAGCAG CTCCTCGCTG CTCAGACTCG CCCCAATGGA GCTCACGGAG GGGGAGAGA AGGGAGCACT TTAAGAGTTG AGGTCCCAGT ATTCACTCTT AACAGTGACG ATCCAGAAGA TAGATGGAAT TTTGCGGTAT TCTGTCTTCG GATTGCTGTT AGCGAGGACG CCAACAAACC GCTCAGGCAA GGTGCTCTCA TATCCCTCCT GTGCTCCCAT TCTCAAGTGA TGAGGAACCA TGTTGCCCTT GCAGGAAAAC AGAATGAGGC TACACTGACT GTTCTTGAGA TCGATGGTTT TACCAGCAGC GTGCCTCAGT TCAACAACAG GAGTGGGGTG

TCTGAGGAGA	GAGCACAGAG	ATTCATGGTG	ATAGCAGGGT	CTCTCCCTCG	GGCGTGCAGT
430	440	450	460	470	480
AACGGTACTC	CGTTCGTCAC	GGCTGGGGTT	GAAGATGATG	CACCAGAAGA	TATCACTGAT
490	500	510	520	530	540
ACTCTGGAAA	GAATCCTGTC	TATCCAGGCT	CAGGTATGGG	TCACAGTAGC	GAAGGCCATG
550	560	570		590	600
ACTGCATATG	AGACAGCAGA	TGAGTCGGAA		TCAATAAGTA	CATGCAGCAA
610 GGCAGAGTCC	620 AGAAGAAGTA	630 CATCCTCCAC			660 TCAACTCACA
670	680	690	700	710	720
ATCAGACATT	CTCTGGCAGT	CCGCATTTTC	TTAGTTAGCG	AGCTTAAGAG	AGGCCGCAAT
730	740	750	760	770	780
ACGGCAGGTG	GGAGCTCCAC	GTATTACAAC	TTAGTAGGGG	ATGTAGACTC	ATACATCAGG
790	800	810	820	830	840
AACACCGGAC	TTACTGCATT	CTTCCTTACA	CTCAAATATG	GAATTAATAC	CAAGACATCA
850	860	870	880	890	900
GCCCTAGCAC	TCAGCAGCCT	CACAGGCGAT	ATCCAAAAGA	TGAAGCAGCT	CATGCGTTTA
910	920	930	940	950	960
TATCGGATGA	AGGGAGAAAA	TGCGCCGTAC	ATGACATTGC	TAGGTGACAG	TGATCAGATG
970 AGCTTTGCAC	980 CGGCTGAGTA	990 TGCACAGCTT			1020 GGCATCAGTC
1030	1040	1050	1060	1070	1080
TTAGATAAAG	GAACTGGCAA	ATACCAATTC	GCCAGAGACT	TCATGAGCAC	ATCATTCTGG
1090	1100	1110	1120	1130	1140
AGACTCGGGG	TGGAGTATGC	TCAGGCTCAG	GGGAGTAGCA	TCAACGAAGA	CATGGCTGCT
1150	1160		1180	1190	1200
GAGCTAAAAC	TAACCCCGGC		GGCCTGGCAG	CTGCTGCCCA	ACGAGTGTCT
	1220 GCAGCGTGGA				
	1280 CCCGAGCCTC				
	1340 AGACCCAATT				
	1400 CCGCACAGAG				
	1460 ACACCGACTG				1500

- 3. (Amended) <A nucleic acid molecule>[Nucleotides] encoding the full length or part of the phosphoprotein (P) of Newcastle disease virus (NDV).
- 4. (Amended) The [nucleotides as claimed in]<nucleic acid molecule of> claim 3<, wherein the nucleic acid molecule comprises the nucleotide sequence set forth as SEQ ID NO: 2.> [characterised in that it has the following nucleotide sequence:

10 ATGGCCACCT	20 TTACAGAȚGC		40 GATATATTTG		60 AACTGTCATT
70	80	90	100		120
GACAGCATAA	TTACGGCCCA	GGGTAAATCA	GCAGAGACTG		CGCAATCCCA
130	140	150	160	170	180
CAAGGCAAGA	CCAAAGCGCT	GAGCATAGCA	TGGGAGAAGC	ATGGGAGCAT	CCAACCATCC
190 ACCAGCCAGG	200 ACAACCCCGA	210 CCAACAGGAT			
250	260	270	280	290	300
CAGGCGACCC	CACACAACAG	CTCGCCAGCC	ACATCCGCCG	AACCGCTCCC	CACTCAGGCC
310 GCAGGTGAGG	320 CCGGCGACAC	330 ACAGCTCAAG		350 GCAACTCTCT	
370	380	390	400	410	420
CTCGACAAGC	TGAGCAATAA	ACCATCTAAT	GCTAAAAAGG	GCCCATGGTC	GAGTCCCCAG
430 GAAGGATATC	440 ATCAACCTCC	450 GACCCAACAA		470 AGCCGAACCG	
490	500	510	520	530	540
CAGGAGAGGC	TGCGGCACCA	AGCCAAGGCC	GCCCTGGAA	GCCGGGGCAC	AGACGCGAGC
550 ACAGCATATC	560 ATGGACAATG			590 CTGGTGCAAC	
610	620	630	640	650	660
CTCCAATCAG	GGCAGAGCCA	AGACAGTACT	CCTGTACCTG	TGGATCATGT	CCAGCCACCT
670	680	690		710	720
GTCGACTTTG	TGCAGGCGAT	GATGACTATG		TATCACAGAA	GGTAAGTAAA
730	740	750	760	770	780
GTCGACTATC	AGCTAGACCT	AGTCTTAAAG	CAGACATCCT	CCATCCCTAT	GATGCGGTCT
790	800	810	820		840
GAAATCCAAC	AGCTAAAAAC	ATCTGTTGCG	GTCATGGAAG		CATGATGAAA
850	860	870	880	890	900

ATTCTGGACC	CTGGTTGTGC	TAACATTTCA	TCCTTAAGTG	ATCTGCGGGC	AGTCGCCCGG
910	920	930	940	950	960
TCCCACCCAG	TTTTAATTTC	AGGCCCCGGA	GATCCGTCCC	CCTACGTGAC	ACAAGGGGGT
970	980	990	1000	1010	1020
GAGATGACAC	TCAATAAACT	CTCACAACCA	GTACAACACC	CTTCCGAGTT	AATTAAATCT
1030	1040	1050	1060	1070	1080
GCCACAGCGG	GCGGACCTGA	TATGGGAGTG	GAAAAGGACA	CTGTCCGTGC	ATTGATCACC
1090	1100	1110	1120	1130	1140
TCGCGCCCGA	TGCATCCAAG	CTCCTCAGCT	AAGCTCCTGA	GTAAGCTGGA	TGCAGCCGGG
1150	1160	1170	1180	1190	1200
TCGATTGAAG	AGATCAGAAA	GATCAAGCGC	CTTGCACTAA	ATGGCTAA	

5. (Amended) [The]<A nucleocapsid (NP)> protein <of Newcastle disease virus (NDV) encoded by the nucleic acid molecule>[coded according to] <of> claim 1 or claim 2<, wherein the protein comprises the amino acid sequence set forth as SEQ ID NO: 3.> [characterised in that it has the following amino acid sequence:

1	M ATG 1		S TCC	GTA			GAA	TAC		CÃG		CTC			_	T ACT	16
17	R CGC 50	CCC	AAT				GGA										32
33			V GTC	CCA		TTC		CTT	AAC	AGT		GAT		GAA			48
49	W TGG		F TTT	GCG		TTC	TGT		CGG			V GTT 180					64
65	N AAC	AAA	P CCG 200	CTC		CÃA	GGT	GCT	CTC	ATA	TCC	CTC	CTG	TGC	S TCC		80
81		_	V GTG 25	ATG	AGG		CAT		GCC	CTT	GCA		AAA	CAG			96
97	A GCT 290	ACA	CTG	ACT	GTT		GAG	ATC	GAT	GGT	TTT		-	-		P CCT	112
113		TTC	N AAC	AAC	AGG	AGT	GGG	GTG	TCT	GAG	GAG	AGA		CAG		F TTC	128

129	M ATG	V GTG 390	I ATA	A GCA		S TCT 00	L CTC		R CGG 410	A GCG	C TGC	S AGT 420		G GGT		P CCG 30	144
145			T ACG 440	A GCT	G GGG	V GTT 450				A GCA 60	P CCA	GAA	D GAT 470	I ATC	T ACT	D GAT 480	160
161		L CTG	E GAA 4		I ATC	CTG		I ATC	Q CAG	A GCT 510	Q CAG	V GTA		V GTC 20	T ACA	V GTA	176
177		K AAG	A GCC	M ATG 540	T ACT		Y TAT 55	GAG	T ACA		D GAT 560	E GAG	S TCG	E GAA 570	T ACA	R AGA	192
193		_	N AAT	AAG	Y TAC 590	_	_		G GGC		V GTC 61	CAG	K AAG	AAG	Y TAC 620	I ATC	208
209	L CTC		P CCT	V GTA	C TGC 64		S AGT	GCA	I ATT 650	Q CAA	L CTC	T ACA 660	I ATC	R AGA		S TCT 70	224
225	L CTG		V GTC 580	R CGC	I ATT	F TTC 690		V GTT		E GAG 00	L CTT		R AGA 710	G GGC	R CGC	N AAT 720	240
241	T ACG	A GCA	G GGT 73		S AGC			Y TAT	Y TAC	N AAC 750	L TTA	V GTA			V GTA	D GAC	256
257			I ATC	R AGG 780	N AAC	T ACC	•		T ACT		F TTC 300	F TTC	L CTT	T ACA 810	L CTC	K AAA	272
273	Y TAT 82	GGA	I ATT		T ACC 330	K AAG		S TCA 840	A GCC	L CTA	A GCA 85		S AGC		L CTC 360	T ACA	288
289	G GGC	D GAT 870	I ATC		K AAG 88		K AAG		L CTC 390	M ATG	R CGT	L TTA 900	Y TAT	R CGG	M ATG 91		304
305		GAA	N AAT 920			Y TAC 930				CTA	G GGT	GAC					320
321	S AGC		A GCA 97	CCG	A GCT	GAG	Y TAT 980		-	L CTT 990			F TTT 100	GCC		G GGC	336
337 1	M ATG 1010	A GCA	TCA	V GTC .020	L TTA	D GAT		GGA	T ACT	GGC		Y TAC	CAA	F TTC .050	A GCC		352
353	D GAC 106	TTC	M ATG	AGC			TTC		R AGA	L CTC			E GAG			_	368
369		Q CAG 110	G GGG	S AGT	S AGC 112	ATC	N AAC		D GAC L30	M ATG		A GCT 140	E GAG	L CTA	K AAA 115		384

385	T ACC	ÇCG	GCA		AGA	R AGG 1170	GGC	CTG	GCA	GCT	GCT	GCC	CAA	CGA			400
401			ACT	GGC	AGC	V GTG 12	GAT	ATT	CCT	ACT	CAA	CAA	GCC	GGG		L CTC	416
	т АСТ 250	GGG	CTC	AGC	GAT	GGA	GGC	CCC	CGA	GCC	TCT	CAG		GGA			432
433	AAG	TCG	CAA	GGG	CAA	P CCA	GAT	GCC	GGA	GAT	GGG	GAG	ACC	CAA	TTC		448
449			ATG	AGA	GCA	V GTG 60	GCG	AAC	AGC	ATG	CGA	GAA	GCG		AAC	TCC	464
465	A GCA	CAG	AGC	ACC	ACC	H CAC 1410	CCG	GAA	CCC	CCC		ACT		GGG		TCC	480
481	~		AAC	GAC	ACC	D GAC	TGG		TAT	TGA							490
			14	, ,		Т.	. 00		-	14/0]

6. (Amended) [The] <A phosphoprotein (P)> protein <of Newcastle disease virus (DNV) encoded by the nucleic acid molecule> [coded according to] <of> claim 3 or claim 4<, wherein the protein comprises the amino acid sequence set forth as SEQ ID NO: 4.> [characterised in that it has the following amino acid sequence:

1	M ATG 1	A GCC		F TTT 10	T ACA	D GAT	A GCG 20	E GAG	I ATA	D GAT 30	D GAT	I ATA		E GAG 10	T ACC	S AGT	16
17	G GGA 50	T ACT	V GTC	I ATT 60	D GAC	S AGC	I ATA	I ATT 70	T ACG	A GCC	Q CAG 80		K AAA	S TCA 90		E GAG	32
33	T ACT 10		G GGA		S AGC 110		I ATC		~	GGC				GCG	_	S AGC	48
49	I ATA	A GCA 150	W TGG	E GAG		Н САТ 60	G GGG	S AGC	ATC	Q CAA	P CCA	S TCC 180	T ACC	S AGC	Q CAG		64
65	N AAC		D GAC 200	Q CAA	Q CAG		R AGA			AAA	Q CAG		S TCC 230	T ACA	P CCT	E GAG 240	80
81	Q CAG	A GCG		P CCA 50	H CAC		S AGC 260		P CCA		T ACA	S TCC	A GCC 28		P CCG	L CTC	96

97	P CCC 290							GCC	G GGC	GAC	т АСА 320	_			T ACC	G GGA	112
113		_						M ATG 360		D GAC				AAT	K AAA 380		128
129	S TCT		A GCT	K AAA	AAG		P CCA	TGG		S AGT	P			G GGA		H CAT 30	144
145	Q CAA	CCT			CAA	Q CAA 450		G GGG		Q CAG 60	P CCG	AAC		G GGA	N AAC	-	160
161	Q CAG	E GAG	AGG	L CTG 90		CAC				A GCC 510		P CCT	GGA	S AGC 20	R CGG	G GGC	176
177	T ACA 530							CAT		Q CAA						L CTA	192
193		GCT		GCA	ACC	CCT		GTG	CTC	Q CAA	TCA	GGG	CAG	S AGC	CAA	D GAC	208
209	S AGT	T ACT 630	P CCT	V GTA	CCT	V GTG 10				Q CAG	P CCA			D GAC		V GTG 70	224
225	Q CAG	GCG	M ATG 680		T ACT	ATG	M ATG	GAG	A GCG 70	TTA				V GTA	S AGT	K AAA 720	240
241	V GTC		Y TAT 73	CAG		GAC				K AAG 750	-				I ATC	_	256
257	770	M ATG	R CGG	S TCT 780		I ATC	CÃA	Q CAG 90	L CTA	K AAA {	T ACA 300	S TCT	V GTT	A GCG 810	V GTC	M ATG	272
273			N AAT					K AAA 840		L CTG	GAC	P CCT 50					288
289	I ATT						L CTG	CGG		V GTC		R CGG 900					304
305					CCC			CCG		P CCC 40	TAC		ACA	_	G GGG		320
321	E GAG	M ATG	ACA	L CTC 70		AAA				P CCA 990					S TCC		336
337	L TTA		K AAA				A GCG	G GGC	G GGA	P CCT	D GAT	M ATG		V GTG		K AAG	352

1	010			1020			103	30		10	040		:	1050			
353			V GTC			L TTG	_		-	R CGC	P CCG		H CAT			S TCC	368
	106	5U		10	070		-	1080			109	90		1.	100		
369	s	Α	K	L	L	s	K	L	D	Α	Α	G	s	I	E	E	384
	TCA	GCT	AAG	CTC	CTG	AGT	AAG	CTG	GAT	GCA	GCC	GGG	TCG	ATT	GAA	GAG	
	J	1110			112	20		1:	130		1	1140			115	50	
385	I	R	K	I	K	R	L	A	L	N	G	*					396
	ATC	AGA	AAG	ATC	AAG	CGC	CTT	GCA	CTA	AAT	GGC	TAA					
		13	160		1	170			118	30]

15. (Amended) A fused or non-fused form of NDV nucleocapsid protein isolated and purified from culture of the transformed microorganism of claim 11 or claim 13<, wherein the protein comprises the amino acid sequence set forth as SEQ ID NO: 3.> [characterised in that it has the following amino acid sequence:

1	M ATG 1		TCC										GCT		Q CAG		16
17				G GGA 60			GGA								L TTA		32
33	GTT									S AGT		GAT		GAA	D GAT 140		48
49				GCG		TTC	TGT		CGG						D GAC		64
65	N AAC	AAA						GCT		ATA		CTC		-	S TCC		80
81	S TCT		GTG			AAC								CAG	N AAT		96
97	A GCT 290	ACA	CTG		GTT	CTT	GAG	ATC		GGT	TTT				V GTG		112
113			AAC		AGG	AGT	GGG	GTG		GAG	GAG	AGA	GCA	_	AGA		128
129	M ATG		ATA		GGG	TCT	CTC	CCT	CGG		C TGC	AGT	AAC	GGT	T ACT 43	CCG	144
145	F TTC		_		_	V GTT		D GAT		A GCA			D GAT	I ATC	T ACT	D GAT	160

			440			450			4	60			470			480	
161	T ACT	L CTG	GAA	R AGA 90			-		-	A GCT 510		V GTA	TGG	V GTC 20	_	V GTA	176
177	A GCG 530		A GCC	M ATG 540	T ACT		Y TAT 5	GAG	T ACA	GCA	D GAT 560	E GAG	S TCG	E GAA 570	T ACA	R AGA	192
193		I ATC 30	N AAT	AAG	Y TAC 590		CAG	Q CAA 600	GGC			CAG	K AAG	K AAG	Y TAC 620		208
209	L CTC		P CCT							-	L CTC		I ATC	R AGA	CAT	s [·] TCT 70	224
225								GTT	S AGC 70			K AAG		G GGC	R CGC	N AAT 720	240
241	T ACG	A GCA		G GGG 30	S AGC				Y TAC	N AAC 750	L TTA	V GTA		D GAT	V GTA	D GAC	256
257	S TCA 770		I ATC	R AGG 780	N AAC		G GGA 79	CTT			F TTC 300	F TTC	L CTT	T ACA 810	L CTC	K AAA	272
273	Y TAT 82	GGA				AAG				CTA	A GCA 8	CTC	S AGC	S AGC	-	T ACA	288
289	G GGC		I ATC	Q CAA	K AAG 88					M ATG	R CGT	L TTA 900	Y TAT	R CGG		K AAG LO	304
305	G GGA		и ААТ 920	A GCG			M ATG		L TTG			D GAC		D GAT	Q CAG	M ATG 960	320
321	S AGC	F TTT		P CCG 70		GAG	Y TAT 980			L CTT 990			F TTT 10	A GCC 00	M ATG	G GGC	336
	M ATG		TCA					GGA	ACT		AAA		CAA	F TTC 1050			352
353		TTC					TTC			L CTC		GTG	E GAG	TAT	A GCT LOO		368
369		-					AAC		GAC	M ATG	GCT	A GCT 1140	E GAG	L CTA			384
385				A GCA	AGA	R AGG L170	GGC	CTG		GCT	A GCT	GCC	Q CAA L90	R CGA			400
401	E	Е	T	G	s	v	D	I	P	T	Q	Q	A	G	v	L	416

	GAG	GAA	ACT 12:			GTG 12						CAA	GCC 12		GTC	CTC	
	T ACT 250	GGG	CTC	AGC	GAT	G GGA	GGC	CCC	CGA	GCC	TCT	CAG	GGT	GGA			432
433		TCG	CAA	GGG	CAA	P CCA	GAT	GCC	GGA	GAT	GGG	GAG	ACC	CAA	TTC		448
449		TTG	ATG	AGA	GCA	V GTG 60	GCG	AAC	AGC	ATG	CGA	GAA	GCG	CCA	AAC	TCC	464
465	A GCA	CÃG	AGC	ACC	ACC	H CAC 1410	CCG	GAA	CCC	CCC	CCG	ACT		GGG		TCC	480
481	~			GAC	ACC	D GAC		GGG		TGA			•				490

16. (Amended) A fused or non-fused form of NDV phosphoprotein isolated and purified from culture of the transformed microorganism of claim 12 or claim 14<, wherein the protein comprises the amino acid sequence set forth as SEQ ID NO: 4.> [characterised in that it has the following amino acid sequence:

1	M ATG 1	A GCC		F TTT 10		D GAT	A GCG 20	E GAG		D GAT 30	D GAT	I ATA		E GAG 40	T ACC	S AGT	16
17	G GGA 50	T ACT	V GTC	I ATT 60	D GAC	S AGC	ATA	I ATT 70			Q CAG 80			S TCA 90			32
33	ACT			R AGG							AAG			GCG			48
49	I ATA	A GCA 150	W TGG	E GAG		H CAT 50	G GGG	AGC	I ATC L70	-	_	S TCC 180	T ACC	S AGC		D GAC 90	64
65				Q CAA	-					AAA		CTA		T ACA			80
81	Q CAG	A GCG	ACC	P CCA 50	H CAC		S AGC 260		P CCA				A GCC 28		P CCG	L CTC	96
97	P CCC 290	T ACT	Q CAG	A GCC 300	A GCA					GAC		-		K AAG 330		G GGA	112

113		-					S TCT	M ATG 360	L CTC	D GAC	K AAG 3	CTG	S AGC	AAT	K AAA 380		128
129	S TCT	N AAT 390	A GCT		AAG	G GGC D0		TGG				Q CAG 420	e gaa	G GGA	TAT		. 144
145	Q CAA	CCT			CAA	Q CAA 450						AAC	R CGC 470	G GGA		S AGC 480	160
161	Q CAG					CAC			AAG	A GCC 510			G GGA 52			G GGC	176
177	T ACA 530						TAT			CAA			E GAG		_	L CTA	192
193			G GGT		ACC				L CTC		S TCA 63	GGG	Q CAG	AGC	Q CAA 520		208
209	S AGT	T ACT 630	_					CAT		Q CAG			V GTC	D GAC			224
225	Q CAG	GCG										CAG	K AAG 710	V GTA		K AAA 720	240
241			Y TAT 7	CAG	CTA		CTA	GTC			_	ACA	S TCC 76	TCC	_	P CCT	256
257	м АТG 770	M ATG	R CGG	S TCT 780		I ATC	~				T ACA 300	S TCT	V GTT		V GTC		272
273	E GAA 82			L TTA		M ATG			I ATT		D GAC 85		G GGT		A GCT 360	N AAC	288
289	I ATT			L TTA		GAT		CGG					S TCC		CCA		304
305	L TTA	ATT								CCC		GTG	T ACA 950	_			320
321	E GAG		ACA			AAA		TCA		CCA			H CAC 100	CCT			336
	L TTA 010		AAA					GGC		CCT			G GGA				352
353	D GAC		V GTC							R CGC			H CAT	P CCA			368

1060				10	070		1080				1090				1100			
369	s	Α	K	L	L	s	к	L	D	Α	Α	G	s	I	E	E	384	
	TCA	GCT	AAG	CTC	CTG	AGT	AAG	CTG	GAT	GCA	GCC	GGG	TCG	ATT	GAA	GAG		
	1110			1120				1130			:	1140			11	50		
385	I R K		I	ĸ	R	L	Α	L	N	G	*					396		
	ATC	AGA	AAG	ATC	AAG	CGC	CTT	GCA	CTA	AAT	GGC	TAA						
	1160				1	L170		1180)]	